

DOCUMENT RESUME

ED 456 968

RC 023 160

AUTHOR Booth, Margaret Zoller
TITLE The Home Environment and School Achievement: A Longitudinal Study of Primary School Children in Swaziland.
SPONS AGENCY Spencer Foundation, Chicago, IL.
PUB DATE 1999-06-00
NOTE 11p.
PUB TYPE Reports - Research (143)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement; Dropout Rate; *Educational Attainment; Elementary Education; *Elementary School Students; *Family Environment; *Fatherless Family; Females; Foreign Countries; Males; Migrant Workers; Parent Influence; Parent Student Relationship; Role Models; Rural Education; School Readiness; *Sex Differences
IDENTIFIERS *Swaziland

ABSTRACT

In rural Swaziland, fathers often migrate for work, leaving wives and children behind. The family is denied the presence of a husband, father, and role model, as well as economic support, which fathers often fail to remit home regularly. A longitudinal study investigated the effects of parent availability and other home characteristics on the school achievement of 80 rural Swazi children in 6 schools. Results indicate that father absence was a significant detriment for Swazi children, particularly boys, as they progressed through school. When compared to other home characteristics, parental availability was one of the top predictors of school success, followed by the amount of time available at home for schoolwork, regularity of parental reading at home, regularity of the child being read to at home, presence of someone to aid in schoolwork, and regularity of the child eating breakfast. In addition to father absence, other socially constructed variables rather than academic ability hindered the educational progress of Swazi schoolchildren. Both boys and girls experienced problems receiving quality education but for different reasons. Girls generally performed better academically than boys, but they also dropped out at higher rates. Girls dropped out because of pregnancy and marriage; boys dropped out because they fell behind due to staying home and caring for livestock. A school preparedness test administered in grade 1 was able to predict those students who would repeat grades, but not those who would drop out. (TD)

The Home Environment and School Achievement:
A Longitudinal Study of Primary School Children in Swaziland

By

Margaret Zoller Booth

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

- ☒ This document has been reproduced as received from the person or organization originating it.
- ☐ Minor changes have been made to improve reproduction quality.
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Margaret
Zoller Booth

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

SPENCER FOUNDATION PROJECT REPORT

The Home Environment and School Achievement: A Longitudinal Study of Primary School Children in Swaziland

FOCUS OF THE RESEARCH

This project constitutes the third phase in a longitudinal study investigating the effects of the traditional rural Swazi home environment on primary children's school achievement. The major focus of this study has concerned the availability of parents in this southern African culture where fathers migrate for work, leaving wives and children behind. The migrant family is not only denied the presence of a husband, father and role model, but also the economic support which fathers often fail to remit home on a regular basis. In addition to parental availability, other home characteristics have also been explored during this nine year study which included three research visits to Swaziland by the researcher (1990, 1994, and 1998). While the Spencer Foundation has supported only the last portion of the study (1998 research), a summary of some of the earlier findings in addition to the final discoveries will be reported in each topical section in order to place the entire longitudinal study in context. The major questions investigated during the entire study were as follows.

1. Can a school preparedness test given to students upon entering grade one accurately predict those students who will perform well academically in the Swazi school system? For this last phase of the study, the emphasis was on the predictive validity of the original school preparedness test on primary school completion.
2. What are the immediate and long-term effects of parental availability on children's preparedness for and achievement in the Swazi school system? For this last phase of the study, the emphasis was on the achievement of successfully ending primary school and continuing on to secondary.
 - 2a. Does parental availability impact Swazi boys differently from Swazi girls in relation to school preparedness and long-term school success?
 - 2b. Is there a relationship between socioeconomic status (SES) and school achievement when impacted by parental availability?
3. What other home environmental factors, in addition to parental availability, influence a student's school achievement in rural Swaziland? For this last phase, the emphasis was on completion of primary and successfully entering secondary.

FINDINGS

The sample for this study was located in six schools throughout all regions in Swaziland. All schools were visited by the researcher and a Swazi research assistant. Interviews were conducted with the head teacher and other teachers regarding the location of the original 80 students participating in the study. While some students were still found in each primary school, others had moved on. Records were kept of those students who had passed the national primary exam after completing grade 7 and also to which secondary school they were now attending. When records were incomplete, the head teacher, other teachers or fellow students often knew the current location of each student. Only after all possibilities were exhausted were students classified as "do not know." See table 1.

Once a student was located, s/he was interviewed and a visit was made to their home to

interview a parent regarding the development of this student since our last visit. These homestead visits were the third made to each home in the nine year study. From these interviews, information was obtained regarding: the family make-up of the home; educational levels; socioeconomic status; daily routines and chores; and socio-cultural perspectives of education and other topics related to the growth and development of the children. This information was used in both quantitative and qualitative analysis.

Description of Students found in various years

The measure used for "school success" in this study in Swaziland has been the grade level of achievement, since students do not progress to the next grade level if they have not been successful in their grade level's academic goals. Students are often held back when they do not meet these criteria. Unlike the United States, this is not referred to as failing a grade level, but as "repeating." Grade levels therefore make for a good measure of school achievement, especially the farther students go through the system. Also unlike the United States, students drop out of the school system at a much higher level. The reasons for students dropping out of the system varies from academic disqualification to social/environmental characteristics (lack of finances for school fees or early marriage/pregnancy). The degree to which students do drop out for non-academic reasons has been continually debated. The degree to which parental availability is related to this is discussed later in the report.

Table 1: Student Sample Location in 1998

Student descriptor	Boys	Girls	Total #	Percent of total
Dropped out during first 4 years of school (prior to 1994)	3	5	8	10.0
Dropped out between 1994 and 1998	4	5	9	11.3
Found in grade 5	2	0	2	2.5
Found in grade 6	6	1	7	8.8
Found in grade 7	1	4	5	6.3
Found in grade 8 (Form I, secondary)	7	10	17	21.3
Found in grade 9 (Form II, secondary)	5	6	11	13.8
Transferred to a different school; whereabouts unknown	1	3	4	5.0
Do not know anything about child now	5	7	12	15.0
Child passed away	1	1	2	2.5
Passed primary exam but dropped out afterward	0	3	3	3.8
TOTAL	35	45	80	100%

As represented in table 1, information collected in 1998 reveals that a total of 17 of the original 80 students (21.3%) had dropped out of the school system before completing primary

school.¹ Another 3 students (3.8%) dropped out of school after having completed and passed their primary level exams. These three students were very successful females who passed with high grades. Yet they were forced out of school because two of them became pregnant while the third was married off in an arranged marriage.

Validity of School Preparedness Test

Research in 1994 found that the preparedness test was able to classify potentially the best and worst students four years later from the sample of children entering Grade one (Booth, 1996).

Research in 1998 found that 42 of the original 80 students (52.5%) were still in the Swaziland school system, spread among 5 grades. See table 2. A one-tailed one-way analysis of variance (ANOVA) with student preparedness test scores as the independent variable and later grade level in 1998 as the dependent variable revealed a significant difference among the mean scores of the 5 grades ($F(4, 37) = 5.04, P < .01$). Post hoc analysis revealed that the significant difference was between grade 5 students and all the other grade levels. Consequently, this statistical analysis found that the preparedness test was able to predict those students who would continually repeat (fail) in the Swazi school system.

Table 2: 1998 Distribution by Grade level of the 1990 Preparedness Test Scores

Grade Level 1998	Number	Mean 1990 score	Std. Deviation
5	2	18.50	.00
6	7	29.14	1.63
7	5	28.50	4.83
8 (Form I)	17	28.50	3.72
9 (Form II)	11	29.73	2.67
Total	42	28.45	3.89

Furthermore, when additional analysis was conducted which included all the students found in the various grade levels and the students who had dropped out of school, statistical significance was still only found for grade 5 students ($F(6, 55) = 3.29, P < .01$). Students who had dropped out of school did not have a statistically significant different mean score for the preparedness test. This collaborates with information gained in interviews with parents who revealed reasons for taking their children out of school which were not based on academic ability but rather on socially constructed motives. For instance, the most frequently cited cause for student drop-outs was lack of finances for school fees or uniforms. Other reasons included the need for homestead labor by the child (girls for domestic chores and boys for cattle care), in addition to early marriage or pregnancy for girls.

¹ This figure is actually conservative because many of the number which were unknown (12) were probably also drop-outs.

Parental Availability, Gender, and Socioeconomic Status

The prevalence of father-absence due to migrant labor revealed itself to be a problem in 1990, and its prevalence increased over the nine year study. In 1990, 42 of the original 80 students did not have a father living regularly at home because he migrated for work.² In 1994, the percentage of father-absent students increased to 61.1% (33 of the 54 students found) and in 1998 it rose again to 66.7%. Furthermore, of the 43 students dropped from the sample by 1998, 26 were originally classified as father-absent in 1990. Therefore, the larger percentage of father-absent students in 1998 represents an actual increase in father-absence and not just the fact that more 1990 father-absent children were found than the originally classified father-present children.

Impact on School Readiness

The original study in 1990 found that Swazi children whose fathers were absent were less prepared for a formal school setting than children with fathers at home (Booth, 1995). No difference was found between the different genders or SES levels among the students.

Long-term Impact on School Achievement

The second phase of the study in 1994 found that father-absence *alone* did not significantly affect a child's progress in early grades, when interacting with gender. However, it found that father-absence did have a negative impact on boys' school achievement. That phase of the study also found that boys in general repeated grades at a higher rate than girls. In comparison to other home characteristics, parental availability was one of the top predictors of school success in addition to: the amount of time available at home for school work; the regularity of parental reading at home; regularity of the child being read to at home; presence of someone to aid in school work; and regularity of the child eating breakfast.

Research in 1998 was aimed to investigate the status of students in two different years. First, an inquiry was made regarding the successful completion of primary school in 1996 when they should have been in grade 7. Second, all children's locations were investigated for the year 1998 to discover how many of them had reached secondary school by that time (nine years after the initial study) and who had failed. The information gathered found continued interesting patterns for both the completion of primary grades in 1996 and continued school success into the secondary grades.

1996: Finishing Primary School. The 80 students in this study should have been in grade 7 in 1996; however, only 16 had successfully achieved this level and were preparing to sit for their national exams that year. Of this 16, 10 were female, representing 22.2% of the girls who began in the study in 1990. Only 6 were males, or 17.1% of the original boys. In relation to father availability, 10 in grade 7 had been classified as father-present in 1990 while the remaining 6 had been classified as father-absent.

² Father-absence was defined as visiting the home once per month or less. It is not unusual for parents in Swaziland to have a job which takes them away from the home Monday through Friday. However, parents with this arrangement do come home regularly for weekends. This regularity of weekend living includes a certain amount of stability, financially and personally, which is not found when a parent is home less than this.

Table 3: Grade Level by Father Availability and Sex in 1996

Sex	Father availability		dropped out prior 94*	dropped out post 94**	grade 4	grade 5	grade 6	grade 7	Total
Males	Father Present	Count % within category	0 0	0 0	2 14.3	3 21.4	4 28.6	5 35.7	14 100
	Father Absent	Count % within category	3 20.0	4 26.7	3 20.0	1 6.7	3 20.0	1 6.7	15 100
	Total Males	Count % within category	3 10.3	4 13.8	5 17.2	4 13.8	7 24.1	6 20.7	29 100
Females	Father Present	Count % within category	4 23.5	0 0	2 11.8	1 5.9	5 29.4	5 29.4	17 100
	Father Absent	Count % within category	1 5.9	4 23.5	0 0	2 11.8	5 29.4	5 29.4	17 100
	Total Females	Count % within category	5 14.7	4 11.8	2 5.9	3 8.8	10 29.4	10 29.4	34 100

* Value given in analysis of variance was 1

** Value given in analysis of variance was 2.

Consequently, a 2 x 2 (father availability x sex) analysis of variance (ANOVA) with 1996 grade level as the dependent variable was conducted to investigate whether father availability and sex were significant characteristics for influencing one's ability to complete primary school on schedule. The ANOVA found that father availability was a significant variable ($F(1, 62) = 4.58$, $P < .05$). Furthermore, while sex alone as a variable was not statistically significant, the ANOVA found a significant interaction between father availability and sex, ($F(1, 62) = 5.61$, $P < .05$). Additional crosstabulations and chi-square analysis revealed that the significance was only for boys. While girls dropped out of school at a slightly higher rate than boys (26.4% vs. 24.1% respectively for those found), this drop-out rate for girls was not affected by a father's availability. In other words, girls dropped out of school at a higher rate than boys regardless of whether they have a father at home or not. However, as revealed in Table 3, boys in this sample dropped out of primary school only if their fathers were absent.

In relation to repetition rates, the highest rate for constant grade repetition (failing) is for boys whose fathers have been absent since they were young. As indicated in table 3, father-absent boys have the highest number still in grade 4. Likewise, of the boys who completed school on time, 5 of the 6 were from father-present homes. However, girls have equal numbers from father-present and father-absent homes in grade 7, totaling more than the boys. Thus, following the trend in 1994, girls who managed to stay in school proceeded through the school system on schedule and graduated at a faster rate than boys. Thus, these statistics have revealed a continued trend regarding drop-out rates and repetition rates which were observed in 1994.

1998: Successful Entrance into Secondary School. When research was conducted in 1998, information gained by school records, interviews with students, or interviews with relatives and friends categorized 42 students remaining in the school system.³ Of these 42, 21 were males, constituting 60% of the original sample of boys and 21 were females, or 46% of the original sample of girls. The information gathered about these students along with further knowledge discovered about other students who had dropped out revealed trends in school achievement which were not only similar to those found in 1994 and 1996, outcomes that were often stronger.

Another 2 x 2 (father availability x sex) ANOVA with 1998 grade level as the dependent variable was conducted to investigate whether father availability and sex were significant characteristics for influencing one's ability to continue into secondary school in a timely manner. While father absence or sex were not significant *alone* as variables, the ANOVA revealed a significant interaction with the variables again, ($F(1, 61) = 5.74, P < .05$). Additional cross-tabulations and chi-square analysis revealed that the significance again was only for boys. Of the 7 boys who were known to have dropped out of school by 1998, 6 of them had been classified as father-absent in 1990. In addition, the only students (boys and girls) still remaining in grade 5 in 1998, having repeated 4 times, were father-absent boys. Furthermore, at the opposite end of the grade level, boys with present fathers managed to continue on to secondary school more successfully than boys without fathers. Of the 5 boys found in Form II (grade 9) 4 had fathers at home, and of the 7 boys in Form I, five also had fathers at home. Furthermore, the drop-out rate for girls remains higher than ever after nine years. While 38% of the girls and only 25% of the boys who were relocated had dropped out (28.8% of the original sample of girls and 20% of the original sample of boys), their drop-out rate again was not affected by a father's availability, nor was their success rate in school influenced. Of the 13 girls who had dropped out by 1998, 7 were from father-present homes and 6 were from father-absent. Similarly, the 6 girls found in Form II were equally divided between the father-present and father-absent groups. Finally, while the female sample of drop-outs rose from 9 to 13 from 1996 to 1998, the male number stayed constant at 7.

Another 2 x 2 (father availability x sex) ANOVA was performed including only the sample of students who were actually found still in school in 1998, excluding all others. The students' grade level in 1998 was utilized as the dependent variable. This analysis revealed that only the student's sex was a statistically significant variable for influencing school success rate, ($F(1, 41) = 5.36, P < .05$). This significance supports earlier findings in 1994 which indicated that girls who manage to stay in school do better than boys. By removing the students from the analysis who had dropped out of school and examining only those left in the school system, we can have a clearer picture of academic performance and scholastic success in relationship to gender. If girls in the Swazi school system generally perform better academically than boys, it is ironic that they also drop out of school at a higher rate. This supports the assumption that in particular girls who drop out do so more for socially constructed reasons rather than for academic

³ There may have been more due to the number of transfers and "unknowns" at this time. See Table 1. However, usually when a child is not found later in his/her original school, there is a high chance that this student dropped out of the school system altogether.

failure. If the school readiness test did in fact predict those who would have the most difficulty academically in school, then those who dropped out were generally not the greatest academically "at-risk" students and were being denied access to school for socially constructed motives.

Preliminary analysis of the qualitative information gained from interviews revealed attitudes which may be significant in helping to explain the difference between male and female academic success rates. While this qualitative information is still being analyzed, some points are clear. Generally speaking, female interviewees (mothers, grandmothers, and aunts) displayed a high level of motivation for educating the young women in their families. They felt that this is a "man's world" where their daughters must have an education in order to succeed in life. However, they felt that their sons would survive with or without an education. Thus their own admissions of motivating their daughters more strongly than their sons supplement female students' reports of receiving more encouragement from the women in their families than the men. Conversely, while male students received some encouragement to do well, it was not as strong as that given to female students. Fathers want their sons to do well in school, yet when the father is away for long periods of time he is not there to motivate the son to perform well in school. Furthermore, as reported in Booth (1996), sons have continued to be the members of the family designated as primarily responsible for cattle keeping when fathers are away. This responsibility has consequently caused much school absence, thus affecting academic achievement. This latest research has revealed that even as sons age, their responsibilities rarely diminish in regard to livestock. Yet, even those male students who later had younger brothers to help with cattle keeping developed an attitude toward school that was already badly tarnished because of many years of failure. Many who had repeated several times seemed on the verge of dropping out altogether from despair.

Socioeconomic Status and School achievement: In regard to SES, statistical analysis was conducted for 1996 and 1998 data similarly to those of 1990. Again SES was not a significant variable either alone or when interacting with the other variables. However, as discussed in Booth (1995) SES levels for this group of students were very similar across the entire sample of students. The study was limited to rural students whose families were primarily agrarian and therefore the fluctuation in SES levels was limited. It is arguable that if the study had also included students from urban settings where the wealthiest Swazi live, working in either government positions or large corporations, the SES levels would have varied more greatly and there would have been significant interaction in determining school success.

Other Home Environmental Factors

In 1994, parental availability when compared to other home characteristics was found to be one of the top predictors of school success in addition to: the amount of time available at home for school work; the regularity of parental reading at home; regularity of the child being read to at home; presence of someone to aid in school work; and regularity of the child eating breakfast. This latest data will be analyzed to discern whether these variables remain the top predictors of primary school completion and the ability to enter secondary school. The amount of quantitative and qualitative information collected from subject interviews is abundant and therefore is still being analyzed

General Conclusions and Significance to the Field

The initial focus of the original 1990 study, investigating the impact of parental availability on school achievement, was affirmed to be a significant detriment for Swazi children, and in particular Swazi boys, as they progress through school. The study has also revealed that in addition to father-absence, other socially constructed variables rather than academic ability have hindered the progress of Swazi school children in their quest for a formal education. The socially constructed variables go beyond those which are presently found in today's schools and interviews with today's parents. Additional historical research revealed the development of a colonial school system with European-imposed restrictions on both Swazi males and females. Many of those restrictions have influenced attitudes presently found today (Booth, 1999).

Thus, the relationship of father-availability to school success is a complex issue in Swaziland, having different repercussions for boys and girls. Today it has become fashionable for non-government organizations (NGOs) and national African governments to emphasize "female education" in their grant proposals and educational projects. However, the gender issue regarding education is much more complex than the proposals and projects indicate. Both boys and girls experience problems receiving quality education. However, the reasons for the inability to achieve in school are often very different. While girls are forced out of the school system at higher rates, boys repeat school at much higher rates than girls. While the causes for their educational problems differ, they are both socially constructed, and both are generally not a result of academic inability. If these phenomena persist, African nations will continue to lose some of the brightest and best leaders of future generations because of socially and culturally constructed obstacles.

References

- Booth, M.Z. (1995) *Children of Migrant Fathers: The effects of father absence on Swazi children's preparedness for school*. Comparative Education Review, 39, (2), 195-210.
- Booth, M.Z. (1996) *Parental availability and academic achievement among Swazi rural primary school children*. Comparative Education Review, 40, (3), 250-263.
- Booth, M.Z. (1999) *Education for Liberation or Domestication? Female Education in Colonial Swaziland*. (Paper Presented for the Comparative and International Education Society national conference, April 17, 1999. Paper will also be published as a chapter in the forthcoming book entitled, Colonial and Neo-Colonial Views of Women).

CHANGES IN PLANS

Few changes in plans occurred during the 1998 research, which is one of the benefits of a longitudinal study where the same subjects and schools have already been involved for years. Some changes regarding statistical analysis did occur. This was influenced by the inability to use national primary exam scores for a regression analysis. While the actual scores were not available, pass/fail rates, and also the passing "class" (grade) one received were. In addition, analysis using the exam passing classes were not used because one of the schools in the study was strongly suspected of dishonesty during the 1997 national primary exams. Thus these exam scores were not judged to be reliable as a measure of the students' academic ability. Their grade level achievement was considered valid however, and therefore this also contributed to the decision to utilize grade levels for all students as a measure of school success.

Plans in budgetary items were also changed. The 1998 research was much less expensive for residency costs in Swaziland. The University of Swaziland (UNISWA) kindly rented an apartment to me at very minimal cost. However, other items which were underestimated in the original budget proved to be more costly. These included gifts for participants and to schools for their participation in the study; and for software for data analysis; in addition to other resource materials (books, maps) purchased at the university book store for this project. Approval was received from the Spencer Foundation for budget item changes in advance. A financial report will be arriving from the Budget Grants office of Bowling Green State University.

ADDITIONAL DOCUMENTATION

1. For your information, I have included copies of the two published articles to which I have referred.

Booth, M.Z. (1995) *Children of Migrant Fathers: The effects of father absence on Swazi children's preparedness for school*. Comparative Education Review, 39, (2), 195-210.

Booth, M.Z. (1996) *Parental availability and academic achievement among Swazi rural primary school children*. Comparative Education Review, 40, (3), 250-263.

2. Papers written including the Spencer Foundation research:

Booth, M.Z. (1999) *Education for Liberation or Domestication? Female Education in Colonial Swaziland*. (Paper Presented for the Comparative and International Education Society national conference, April 17, 1999. Paper will also be published as a chapter in the forthcoming book entitled, Colonial and Neo-Colonial Views of Women. The research for this paper was partially funded by *The Spencer Foundation*, Chicago, Illinois.)

In order to write an historical analysis for the book which will be the culminating work from this project, I also conducted historical research in the Swaziland National Archives in Lobamba while I was there. The archival documents collected during that time were utilized in this paper.

Additional articles and one book will be published utilizing the research conducted with Spencer Foundation funds. They will be sent to the Spencer Foundation as they are published.